

# The Tay Landscape Partnership Scheme: Report on the assessment of Mesolithic lithic artefacts



## Summary

*The archaeological record for Mesolithic events in Perth and Kinross has proved elusive. On behalf of the Tay Landscape Partnership Scheme an investigation of the lithic assemblages from Perth and Kinross held in the collections of the National Museums Scotland and Perth Museum and Art Gallery has determined that there are no artefacts which can be unequivocally ascribed to the Mesolithic period. Using South Lanarkshire as an analogy, it is possible that the evidence for Mesolithic events within the designated research area for the Tay Landscape Partnership Scheme can be found through sustained systematic field walking undertaken as community archaeology projects.*

## Introduction

The research area for the Tay Landscape Partnership Scheme 'TLP' is shown at Figure 1, which comprises of 200km<sup>2</sup> incorporating the Carse of Gowrie and the confluence of the Rivers Tay and Earn (Strachan 2012).

The following report is an initial investigation sponsored by the TLP to determine the locations within the research area, if any, where Mesolithic artefacts have been recovered to indicate initial areas for planned community field walking projects.

The only attested evidence for the Mesolithic period in Perth and Kinross comes from Ben Lawers (Atkinson forthcoming), which is to be published shortly at the Scottish Archaeological Internet Resource (J. Atkinson pers. comm.). This initial investigation was not confined to the TLP scheme area but also for Mesolithic events in the known archaeological record for Perth and Kinross. This has involved the evaluation of lithic assemblages beyond the research area to incorporate those assemblages recovered within the modern political county of Perth and Kinross to ascertain if there is any artefactual evidence for the Mesolithic.

The report highlights the absence of evidence for Mesolithic events in Perth and Kinross. The success of community archaeological field walking projects in South Lanarkshire is offered to highlight that it is possible to discover the Mesolithic through systematic and sustained field walking programmes. Finally, there are

brief recommendations of the organisation of community field walking groups, the training of volunteers, and general target locations for field walking.

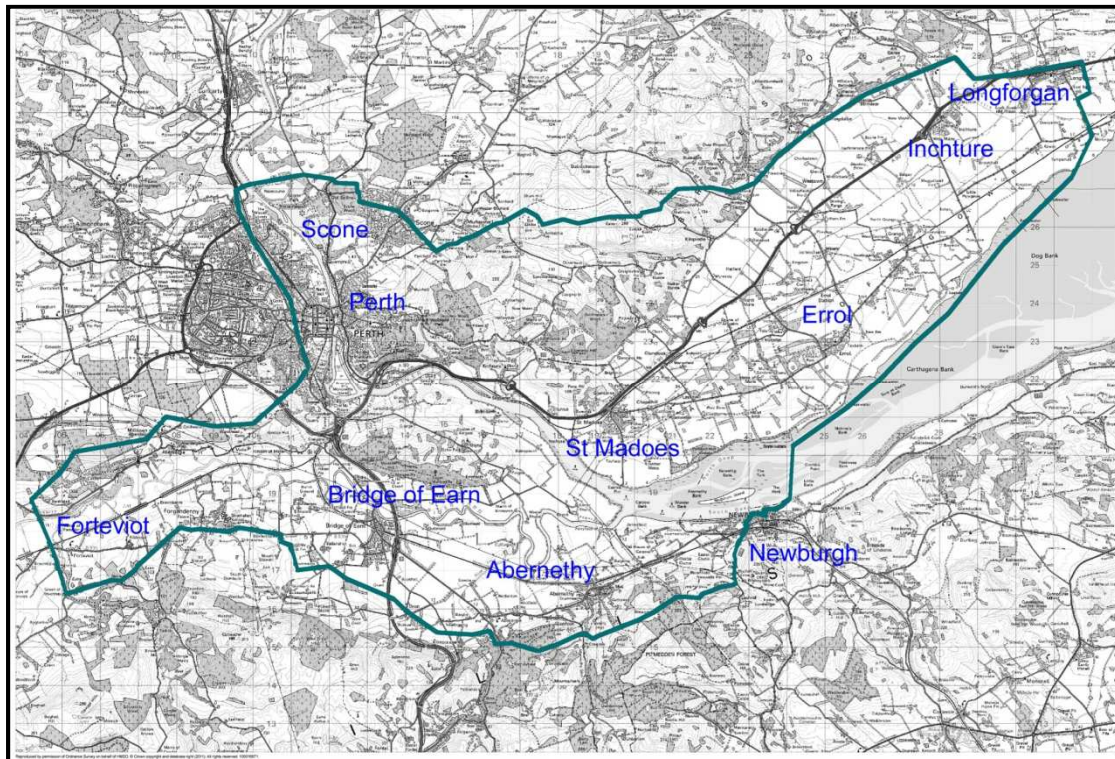


Figure 1: The research area for the TLP (Strachan 2012, Figure 1).

## Aims and objectives

To ascertain whether or not there are any lithics from Mesolithic events in the assemblages from the TLP research area accessioned at the National Museums Scotland 'NMS' and Perth Museum and Art Gallery 'PMAG'. If so, assess their significance and offer recommendations on how the resource may be used in the development of community field walking projects.

The aims and objectives were widened to incorporate an investigation of the lithic assemblages from Perth and Kinross outwith the designated TLP research area.

## Archaeological background

There are 26 entries for putative Mesolithic sites in the Perth and Kinross Historic Environment Record 'PKHER'. The Mains of Murthly (MPK 9220) is duplicated, and there are no lithic artefacts associated with Toft Hill (MPK 3333) and Binn (MPK 3348). Furthermore, a flint scraper from the Mains of Fordie has been retained by the finder (NMS 1993). The lithics from the remaining 22 sites were evaluated.

There are also number of artefacts reported to be Mesolithic from field walking at Dunning undertaken in 1994 and 1995 (Henson 1997), and the lithic assemblages from the University of Glasgow's Stathearn Environs Royal Forteviot 'SERF' project excavations from 2007 to 2010, inclusive.

There are two issues which should be highlighted relating to artefacts with secondary modification (refer to glossary of terms at Appendix II) such as projectile points and scrapers. Firstly, many of the accompanying descriptions to the PKHER classified as Mesolithic suggest a post-Mesolithic provenance, i.e. projectile points typologically classified to either the Neolithic or Bronze Age. For example, leaf-shaped, oblique and barbed and tanged arrowheads are attributable to the Early Neolithic (cf. Warren 2006a, 40), Late Neolithic (cf. Thomas 2010) and Bronze Age (cf. Green 1980, 120), respectively. Secondly, applying a Mesolithic provenance based on the morphology of scrapers as casual finds without further corroborative evidence is generally not sound practice. Scrapers are common artefacts in the assemblages of later prehistory (cf. Finlay *et al.* 2000a, 583). 'Thumbnail' scrapers and rounded scrapers with invasive retouch are typically Bronze Age (Edmonds 1995, 159-160; Hardy and Wickham-Jones 2007). The situation is more complicated for other forms. Angled and sub-angled scrapers are common in Mesolithic assemblages, e.g. they have the highest incidence of occurrence at Kinloch, Rùm (Wickham-Jones and McCartan 1990, 91). These together with convex and straight edge may, however, be found in Neolithic assemblages, with 'horseshoe' and 'disc-like' forms with invasive retouch indicative of the Late Neolithic (Edmonds 1995, 104-105).

Lithic scatters are often palimpsests of events across archaeological epochs. For example, Bronze Age artefacts are commonly recovered from Mesolithic sites such as Camais Daraich, Skye (Wickham-Jones and Hardy 2004) and Oliclett, Caithness (Pannett and Baines 2006). It was possible that artefacts from Mesolithic events may be present in the assemblages and that lithics may have been either unrecognised as Mesolithic, or misidentified and recorded as post-Mesolithic.

Enquiries made to the NMS and PMAG determined that there were lithic artefacts from 47 other sites in Perth and Kinross, none of which have been recorded as typologically Mesolithic in provenance and were considered to be material from the Neolithic and Bronze Age periods. The artefacts from 46 of these sites have been accessioned into museum collections. A flint scraper from the Mains of Murthly was retained by the finder (Reid 1984).

Visits were arranged to the NMS archive at Leith on 7 June 2012 and PMAG on 3 July 2012 to access and scrutinise the lithics from these assemblages to determine if any of artefacts could be unequivocally considered to be Mesolithic in origin. The work was undertaken by the author.

## Methodology

A gazetteer of the lithic assemblages from Perth and Kinross was drawn up using Excel™ (cf. Appendix I) detailing:

- Site control numbers;
- PKHER and Canmore references, where they could be ascertained;
- Museum where assemblages have been accessioned;
- Museum accession reference, where established;
- Site name and parish; and
- National Grid Reference, where ascertained.

The gazetteer was put together following searches at the Royal Commission on the Ancient and Historic Monuments of Scotland and Perth and Kinross Heritage Trust on-line facilities at Canmore and PKHER, respectively and written enquiries directed to the curators at the NMS and PMAG. Alan Saville of NMS kindly provided a print-out of the museum record for the lithic assemblages for Perth and Kinross. The gazetteer also includes those sites where the artefacts recovered from field walking were retained by the finder (cf. Reid 1984 and NMS 1993).

The gazetteer comprises of 70 sites made up from the 23 sites in the PKHER classified as Mesolithic and the 47 sites from the NMS. Two sites were not included in the gazetteer. The analysis of the lithics from Nethermuir (MPK 17553) and Ballendrick (Canmore 227495) was undertaken by Caroline Wickham-Jones and determined to be Neolithic (cf. Barclay and Wickham-Jones 2002).

Great difficulty was encountered in reconciling the museum collections to Canmore and PKHER resulting in the failure to determine National Grid References for many of the sites. This has not impacted on the aims and objectives of the project. However, it is clear that a major project at regional and national levels would have to be jointly undertaken to attempt to correct this failing.

The lithic material from the sites was inspected using the formats type and attribute analysis devised and developed the Southern Hebrides Mesolithic Project (Finlayson *et al.* 2000), which built upon the research design used for the assemblages from Kinloch, Rùm (Wickham-Jones 1990), which was itself derived from the terminologies and technological classifications espoused and developed during the 1970s (Tixier *et al.* 1980); subsequently enhanced (Inizan *et al.* 1999). The methodology also includes a microlithic fragment and breakage schema (Finlay 2009), and further aspects of a classification scheme for technological attributes for flakes and blade blanks (Madsen 1992). This research framework has been successfully tested in the technological analysis of a number of Mesolithic assemblages (Wright 2012).

### ***Criteria for the evaluation of assemblages***

An analysis of Early Neolithic assemblages from Eastern Scotland showed marked technological distinctions to Mesolithic assemblages [Table 1] (cf. Warren 2006a). The principal focus for investigation related to blade blanks and blade and non-specific (i.e. negative scars for both blade and flake removals) simple platform cores, i.e. artefacts where a Mesolithic provenance may be reasonably assumed. Consideration was also given to the possible misidentification of retouched artefacts highlighting those pieces which can be categorised as typologically Mesolithic in origin.

<b>Raw materials</b>
Increase in utilisation of quartz and pitchstone
<b>Primary technology</b>
Regular flakes and smaller percentage frequency of blades
Inreased use of faceted platforms
Cores tend to be more irregular
Increase in use of bipolar reduction
Platform and bipolar reduction of quartz
<b>Secondary technology</b>
Distinctive tool forms: leaf shaped arrowheads, plano-convex knives, fabricators, serrated blades
Scrapers possibly tend to be larger than Mesoithic counterparts
Bifacial retouch
Invasive retouch

Table 1: Distinctive technological practice for the Early Neolithic (after Warren 2006a).

## **Results**

### ***Smaller lithic assemblages and casual finds***

The relative chronological provenance of the smaller assemblages and casual finds, comprising of 10 or fewer artefacts from 43 sites, are set out at Table 2.

The majority of the artefacts are non-diagnostic to any given archaeological period in prehistory, but not considered to be Mesolithic. There are 15 sites where scrapers only have been recovered and without a context and corroborative lithic evidence it is not possible to relatively assign any of them to an archaeological period. The scrapers are predominantly convex and straight edge types. The prevalent form of retouch to these artefacts is direct semi-abrupt scalar retouch (after Inizan *et al.* 1999).

There are three sites where scrapers have been found in the vicinity of other lithics. Firstly, at Perth Prison (MPK 3525) two flint scrapers were recovered with two Early Neolithic flint arrowheads. Secondly, a flint scraper was found together at Drumfad with a flint Bronze Age barbed and tanged arrowhead and a flint knife. Thirdly, at Barnhill (MPK 3525) a flint scraper was recovered with a 'broken

nodule', which could more accurately be termed as a chunk. The scrapers from Perth Prison and Drumfad cannot be categorically assigned to an archaeological period, although they would not necessarily be considered out of place if found within Early Neolithic and Bronze Age contexts. The artefacts from Barnhill are non-diagnostic.

A retouched flint blade-like flake was recovered from a garden in Aberargie (after King 1990), although this artefact and the others from the remaining sites cannot be relatively dated.

Site Control	Site	Non-diagnostic	Early Neolithic	Late Neolithic	Neolithic	Bronze Age
1	Leadketty	✓				
2	Loch of Lowes		✓			
3	South Muirton	✓				
4	Stormontfield		✓			
5	Parkfield	✓				
6	Deuchny Wood				✓	
7	Binn Hill					✓
8	Kirkton of Mailer		✓			
9	Perth Prison		✓			
10	Corsiehill	✓				
11, 12, 15	Kinnoull Hill		✓			
13, 16	Perth Murray Royal Hospital	✓				
14	Barnhill	✓				
17	Marlee	✓				
18	Kinloch Hotel	✓				
19	Strathardle					✓
20	Aberargie	✓				
21	St Madoes Kirkyard	✓				
23, 24	Mains of Murthly	✓				
43	Blairgowrie					✓
44	Castle Mains	✓				
45	Lundin Farm	✓				
46, 47	Coupar Angus Abbey					✓
48	Glenfarg Reservoir	✓				
49	Scone	✓				
50	Drumfad					✓
51	River Tay	✓				
52	Alick		✓			
53	Muir of Mais		✓			
54	Cultoquhey		✓			
55	Law Hill	✓				
56	Black Hill	✓				
57	Dalnaglar	✓				
58	Almondbank	✓				
59	Newmill					✓
68	Abernyte	✓				
69	Blair Atholl	✓				
70	Newmill, Bankfoot	✓				

Table 2: Relative dating of small assemblages and casual finds from typologically diagnostic lithic artefacts and those sites where lithics recovered cannot be assigned to an archaeological period in prehistory, although not considered to be Mesolithic.

### ***Larger assemblages***

Brief notes on the larger assemblages, comprising of 10 or more artefacts, are set out below. This includes the SERF excavated assemblages from Forteviot and field walking undertaken at Leadketty, although not included in the gazetteer.

- **Mains of Murthly, Lundin and Weem/Castle Menzies**

The artefacts from these three locations (Appendix I: site control 25, 26 and 27) have been accessioned at PMAG under reference 2003.10. The assemblage from Lundin is exclusively quartz and predominantly quartz with some flint from the Mains of Murthly (Bradley 1995) and Weem/Castle Menzies (Bradley 1995a). As noted above the extensive use of quartz is generally associated with the Neolithic period (after Warren 2006a) which resulted in the focus of investigation targeting the flint artefacts. None of the worked flint, which was predominantly flakes and chunks, could be ascribed to be Mesolithic in origin.

- **Mount Tabor/Herald Hill**

An inspection of the mainly flint artefacts from Mount Tabor confirmed a Late Neolithic/Early Bronze Age provenance (cf. Hall 1998).

- **Carsie**

The lithic material appears to be a palimpsest of Early and Late Neolithic and Bronze Age material. There is no typological evidence to assign any of the artefacts held at the NMS to the Mesolithic period.

- **Newtongray Farm and Newton Gray**

There is no Mesolithic material from these sites. The majority of the artefacts are non-diagnostic, although the flint knife indicates either a Neolithic or Bronze Age provenance.

- **Upper Gothens**

The evaluation of the lithics from Upper Gothens, also referred to as The Gothens, does nothing to alter a previous assessment of being mixed period, although predominantly Neolithic (cf. Coles 1964). None of the artefacts can be unequivocally said to be of Mesolithic origin.

- **Aldclune**

All of the lithic material from Aldclune comprising of flint flakes and chunks are non-diagnostic. Typologically none of the artefacts can be relatively dated to the Mesolithic period.

- **Dunning/Leadketty**

Five retouched artefacts from field walking at Leadketty in 1994 and 1995 have been interpreted as putatively Mesolithic (Henson 1997). Two scrapers are non-diagnostic. In addition, there is a flake, blade-like flake and a blank fragment all with retouch. I have looked at the surface collection from Leadketty from field walking undertaken by the University of Glasgow in April 2007 at Leadketty. Although none of the artefacts can be categorically be classified as Mesolithic this location is potentially the most promising of all of the sites evaluated.



The University of Glasgow's archaeology field school in August 2012 opened up three trenches in the same field walked in 1994 and 1995. The trenches focused on a Neolithic timber structure (LK12.01), a Bronze Age henge (LK12.02), and part of the avenue and perimeter to the Neolithic palisaded enclosure (LK12.03). LK12.01 and LK12.02 are situated within the palisaded enclosure. Sherds of Late Neolithic grooved ware pottery were recovered from secure contexts at LK12.01 and LK12.03. A number of lithics were recovered from all three trenches, although none of which can be ascribed to the Mesolithic period.

- **Forteviot**

None of the artefacts recovered from the SERF excavations undertaken from 2007 to 2010, inclusive can be typologically classified as Mesolithic in origin. The assemblages indicate Early Neolithic, Late Neolithic and Bronze Age events. This suggests that serendipity will not discover the Mesolithic of Perth and Kinross. The archive report for these assemblages is in its final stages of preparation and should be available on-line at the SERF website shortly (<http://www.gla.ac.uk/schools/humanities/research/archaeologyresearch/projects/serf/furtherinformation/#reports>).

## **Field walking**

The results of the assessment of the lithic assemblages from Perth and Kinross have proved to be disappointing as a potential resource and a pointer to planned community field walking projects. It may be argued that the situation is potentially analogous to that of the Mesolithic of South Lanarkshire.

### ***Analogy: Discovering the Mesolithic of South Lanarkshire***

There were five putative Mesolithic sites in what is now South Lanarkshire at the time of the publication of *The Stone Age in Scotland* (Lacaille 1954) in 1954, which represented the known archaeological record at 31 January 1952. Four of these sites were located on the River Clyde close to the Biggar Gap between the confluence with Biggar Water in the south and Covington in the north. The fifth site was near Pettinain on Medwin Water (cf. Lacaille 1954, Figure 73).

The site distribution map remained unchanged until the late 1970s. The systematic field walking undertaken by recreational archaeologists such as Hugh McFadzean and local societies, in particular the Lanark and District Archaeological Society and the Biggar Archaeology Group 'BAG' has re-written the known archaeological record for Mesolithic events in South Lanarkshire. Tam Ward and BAG have been at the forefront of field survey in South Lanarkshire for more than 30 years (Figure 2).

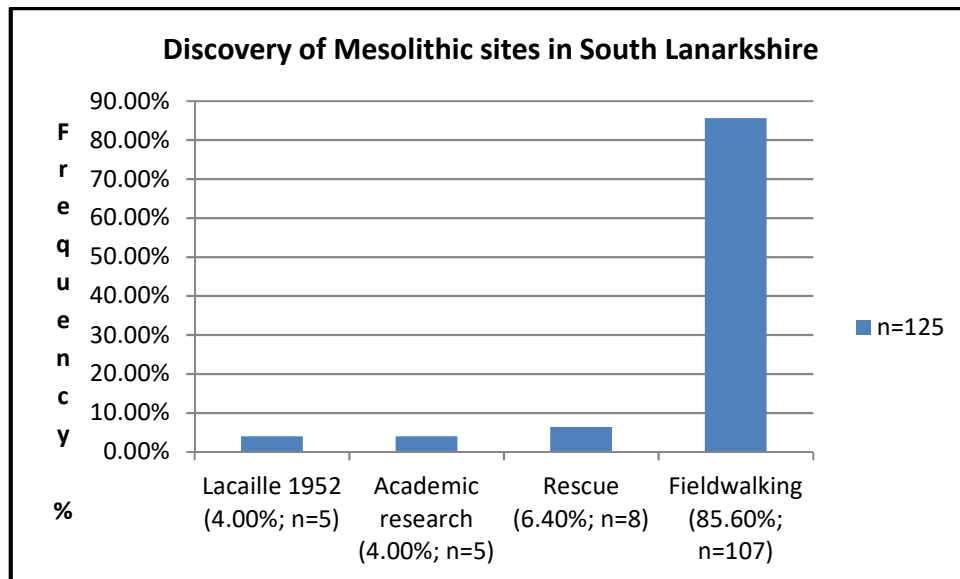


Figure 2: Numerical and percentage frequency of Mesolithic sites in South Lanarkshire as at 31 January 1952 and Mesolithic sites discovered by academic research projects, rescue archaeology and community archaeology field walking and survey.

The impact of academic research projects and rescue archaeology, although welcome has been relatively limited compared to the sustained success of BAG, which has involved a committed team of field walkers devoting their spare time to the discovery of their cultural heritage. Strong links have been forged with landowners and the Forestry Commission who are in effect stakeholders in the work undertaken by BAG. These stakeholders advise BAG of ploughing and forestry trenching plans allowing for targeted field walking schedules to be organised.

### ***Discovering the Mesolithic of Perth and Kinross***

PKHT has a long tradition of putting together teams of volunteers to engage in field work. Ideally, the TLP requirement should be for a minimum two dedicated field walking teams drawn from local communities.

Each year field walking should be programmed to be completed by the end of March. It is important that, where possible, fields should be walked on an annual basis over an extended period of, say, three years or more. The rationale is that if a location does not produce archaeological finds in an initial season of field walking that does not mean that future ploughing rotations will not cast up artefactual material.

Based on the success of discovering Mesolithic sites in South Lanarkshire by recreational archaeologists and BAG (cf. Wright 2012), it is suggested that locations should target:

- River terraces guided by the geographic information system 'GIS' dataset to be produced by Dr Sue Dawson of the University of Dundee showing the coastline from the beginning of the Holocene period;

- Farmland in the vicinity of water courses and the confluence of water courses;
- Breaks of slope in arable upland locations, initially focusing on locales with south facing aspects; and
- Shorelines of either reservoirs or larger bodies of water, preferably when water levels are low.

A TLP field walking manual should be produced, which could be drawn in part from the format developed for the Council for British Archaeology booklet (cf. Connolly 2007), and adapted to reflect and include the specific concerns of the TLP research agenda. The manual would also include bespoke site and artefact recording sheets.

The manual would determine the nature of the artefacts to be collected. All fields will be allocated a unique reference incorporating the year field walking was undertaken. For each field to be walked a global positioning satellite 'GPS' reading should be taken in the centre of the field. Volunteers will be set initially at two metre intervals and will flag all potential finds as they walk their individual transects. The field walking project leaders will determine whether or not the flagged items are artefactual material as defined by the scheme research agenda, and if so, would then be recorded using GPS. A formal recording sheet needs to be designed together with cards to be placed within finds bags. The card will feature a series of tick boxes to describe material, typological classification and relative date, if possible. The co-ordinates, unique finds number and typological characteristics of the artefacts will be logged on the recording sheet and finds card.

The results of the field walking coupled with a comprehensive review of aerial photographs from the research area may suggest areas in which to undertake geophysical survey to attempt to locate hearths, sunken dwellings, pit alignments and other structural evidence. It is also possible to locate shell middens, a strategy successfully demonstrated at Port Lobh, Colonsay (cf. Finlay 2007).

The formal training of volunteers should be an initial and high priority. A training weekend should be scheduled before the commencement of the first season of field walking comprising of:

#### **Day 1: Symposium**

- Introducing the research agenda of TLP generally before focussing on the field walking project.
- The presentation of a TLP field walking manual.
- Question and answer session.
- Presentation of multi-period artefact assemblages comprising of artefacts which may reasonably be assumed to be collected during field walking.

- Artefact handling followed by question and answer session.

## **Day 2: Practical**

- The TLP field walking manual in practice.

Training will be on-going, e.g. field walking leaders would be required to discuss the significance of finds with the community volunteers at the end of each day, providing the basis of the understanding of typologies to aid the future recognition of artefactual material.

## **Conclusions**

The results from the investigation into the lithic assemblages from Perth and Kinross has proved disappointing in not finding any unequivocal evidence of Mesolithic events. The case from South Lanarkshire shows that the discovery of the Mesolithic is not an unreasonable expectation, although this will involve the committed and protracted involvement of volunteers to undertake field walking over a sustained period of time. The TLP should be seeking to create a lasting legacy of community field walking.

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## **Appendices**

Appendix I: Schedule of lithic assemblages.

Appendix II: Glossary of terms.

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